

3 PFTS

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"LOW FREQUENCY LOUDSPEAKER ENCLOSURE
WITH CONFIGURABLE DIRECTIVITY"

CLAIMS

1. A low frequency loudspeaker enclosure (subwoofer), characterized by the fact that it includes at least one pair of loudspeakers mounted in the same box, facing in opposite directions and powered as separate elements by signals coming from a single source but having different amplitude and phase.

5 2. The low frequency loudspeaker enclosure according to claim 1, in which a first loudspeaker faces towards the front and a second loudspeaker towards the rear, in order to send the sound in the opposite directions, said loudspeakers being identical or different from one another and driven by amplification circuits, each including an electronic delay circuit.

10 3. The low frequency loudspeaker enclosure according to claims 1 and 2, in which two open conduits are provided on at least two sides of the front loudspeaker, and in which the rear loudspeaker faces on to a chamber having two side openings.

15 4. The low frequency loudspeaker enclosure according to claim 3, in which said front loudspeaker is contained in the box or protrudes from the front of it.

5. The low frequency loudspeaker enclosure according to claim 3 or 4, in which said conduits and/or side apertures have variable dimensions to modify the system's acoustic parameters.

6. The low frequency loudspeaker enclosure according to the previous claims, which can be placed alongside or stacked on other enclosures to form horizontal and vertical arrays, or coupled and installed one above the other in multiples to form groups operating in a "piston band" set-up.

5 7. Method of constructing a low frequency loudspeaker enclosures which comprises:

- the use of at least a pair of loudspeakers, mounted in the same box, facing in opposite directions compared to the sound emission, one facing forward and the other backwards on to a chamber having side openings;

10 - the powering of the aforementioned loudspeakers as separate elements with signals, coming from a single source but with different amplitude and phase, by using separate amplification circuits, each including an electronic delay circuit, and

15 - the possibility of varying the reciprocal entity of the enclosure's acoustic parameters, modifying the load volume of the loudspeakers and/or dimensions of the conduits/apertures on the front and/or apertures positioned at the rear, in order to obtain different dispersion patterns.